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HURRICANES IRMA AND MARIA MANAGEMENT REPORT

Information contained in this report reflects HQ and regional reporting from the most recently completed operational period as well as other reports provided by HQ, regional and interagency sources.

National Incident Management Objectives

Objective 1: Ensure that health and safety of the EPA responders is considered at all times.

Objective 2: Establish an incident management structure and processes employing the Incident Command System to enable effective overall management of the event with deployment of resources (staff and equipment) in a rapid, aggressive and well-coordinated manner.

Objective 3: Ensure prompt Review and Processing of Fuel Waiver requests.

Objective 4: Prepare for and provide Rapid Assessment of Industrial facilities as requested by the State or under EPA's statutory program responsibilities for CERCLA Superfund, RMP and FRP facilities. Working with our state partners, contact industrial sources within the impacted area to determine their operational status and determine what support can be provided with the monitoring of the start-up of industrial sources.

Objective 5: Prepare for and provide Rapid Assessment & Technical Assistance Drinking Water & Wastewater facilities as requested by the State or local government. EPA will support our state partners in contacting drinking water and waste water systems.

Objective 6: Prepare a Sustained Response Plan that outlines the resource and equipment needs for a long duration response.

Objective 7: Activate the Agency's Crisis Communication Plan to ensure effective and efficient coordination of all incident communications.

Objective 8: Encourage a collaborative federalism approach, where national, state and local governments interact cooperatively and collectively to solve common problems.

Objective 9: Begin Agency internal and external coordination under the National Disaster Recovery Framework regarding Recovery Support Functions in which EPA is likely to be involved.

Executive Summary

Region 2

- For the Virgin Islands (USVI) and Puerto Rico (PR), drier air will push into the region today and into Tuesday. Additional moderate to heavy rainfall will move towards the Virgin Islands and Puerto Rico by Wednesday, with increasing rain chances and coverage expected through Friday. Heavy rain showers stretching from the eastern Gulf of Mexico to well east of Florida, could delay or divert aircraft flying to and from Puerto Rican theater from Atlanta, Miami and Houston. R2 has provided safety advisories regarding the risks of potential flash floods, mud slides, and driving hazards that may impact personnel safety and operations.
- Immediate risk reduction measures are ongoing on October 2nd to stabilize the Guajataca dam spillway and clear outlet blockage.
- The CEPD Guaynabo Office opened on October 2nd. The CEPD office in Vieques, PR sustained minimal damage; it has generator power (though fuel supply is limited), but no water service. The CEPD office in St. Thomas, has been assessed to be in the same condition as post Hurricane Irma.
- In PR, 50% of the (Puerto Rico Aqueducts Sewer Authority) PRASA-served population are without access to drinking water service. PR has an island wide boil-water order. A list of all impacted DW/WW facilities is being prepared to facilitate distribution of generators and/or other repair equipment.
- The waste water treatment plants on all three USVI islands are operational but have limited pumping capacity due to lack of commercial power. The DW system is gaining additional storage on all three USVI islands.
- Assessment teams comprised of OSCs, technical assistance contractors, and public affairs personnel are deploying to Puerto Rico in accordance with our EPA Region 2 Mobilization and Resource Plan. Responders arrived in both the San Juan and Mayaguez areas on October 1st.

Region 4

- The current schedule for management reports from R4 is Tuesday and Friday.
- Mission Assignment funding for EPA Landfill Specialty Teams expires on October 3.
- Four EPA field teams composed of OSCs, Superfund RPMs, and contractors deployed to Florida on September 25th, and established a forward command center in Marathon Key.
- Current EPA operations include staging area identification for orphan containers, hazardous waste, and fuel and oil recovered from vessels. The Key West-Marathon Airport serves as the initial staging area.
- On September 28th, EPA completed all 592 of the assessments of non-community public water systems assigned by FDEP.
- A new Mission Assignment (MA) for \$10,000,000 to continue the EPA ESF-10 Mission through November has been approved.

Regional Mission Assignments and Funding

EPA Region	Mission Assignment Number	Funding Amount	Description of Assignment
Region 2	4339DR-PR-EOA-03	\$10,000,000	Removal, cleanup and disposal of oil & hazmat; collect and dispose of HHW; monitor immediate threats to public H&S and the environment in PR
	VI-17090102-EPA-01	\$10,000	ESF-10 support of the FEMA's RRCC in Colts Neck, NJ
	4335DR-VI-EPA-01	\$100,000	Activate EPA to FEMA R2 RRC in Colts Neck, NJ to support FEMA and FEMA NRCC.
	4335DR-VI-EPA-02	\$1,008,000	To perform assessment of oil and hazardous materials releases, contaminated debris and other environmental events in USVI
	4335DR-VI-EPA-04	\$10,000,000	Conduct oil and hazardous materials field operations, including cleanup and disposal of hazardous materials and oil, and response to orphaned containers in order to mitigate actual and potential threats to public health and safety.
	4335DR-VI-EPA-06	\$2,000,000	EPA provides support preparing for site-specific platforms for situational awareness; environmental data management; operational deployment plans; documentation of assessment activities and results; resource and financial tracking, accountability and cost documentation.
	PR-17090102-EPA-01	\$20,000	Activate EPA to FEMA R2 RRC and other locations as necessary for PR (pre-landfall)
	3384EM-PR-EPA-01	\$75,000	Activate EPA to FEMA R2 RRCC, EPA REOC, State EOC, JFO, PDA, and RNA Teams and other coordination venues to support FEMA response in PR
	4336DR-PR-EPA-01	\$100,000	Activate EPA to FEMA R2 RRCC and other EOCs
	4336DR-PR-EPA-02	\$1,008,000	To perform assessment and reconnaissance of oil and hazardous materials release, contaminated debris and storm impacted infrastructure which may pose a threat to federal responders as well as environmental harm in PR.
Region 4	4337DR-FL-EPA-05	\$90,000	Activation for appropriate EPA personnel to perform the functions of ESF 10 w/ RRCC, IOF, JFO, FEMA's Incident Management Assistance Team (IMAT), Preliminary Damage Assessment (PDA) Team, or other teams and locations, at the direction and coordination of FEMA.
	4337DR-FL-EPA-03	\$525,000	Activate Federal Hazardous Assessment Response Team w/resource support to conduct assessments at hazardous substances within R4

EPA Region	Mission Assignment Number	Funding Amount	Description of Assignment
	4337DR-FL-EPA-04	\$9,000,000	Provide oil and hazardous material field response in support of FEMA response operations providing specialized expertise, conducting damage assessment of oil/hazmat waste impact evaluating hazards; and/or response, removal, or disposal of: actual and potential oil discharges, and releases of hazardous substances, pollutants and contaminants and remove pollutants from vessels in or upon navigable waters and adjoining shorelines.
	4337DR-FL-EPA-07	\$675,000	Provide funding for EPA Landfill Specialty Teams through October 3.
	4337DR-FL-USGC-05	\$10,000,000	EPA will provide oil, hazardous substances, pollutants, and contaminants field response and recovery actions in support of FEMA response and recovery operations.
Total	\$44,611,000.00		

Number of Regional Personnel Involved in Response

Type	R2 Personnel	R4 Personnel	Total Regional Personnel
EPA	104	27	131
Contractors	26	11	35
Totals	130	38	166

Force Laydown for USVI (as reported by Region 2 on October 2nd)

Type	Personnel
EPA	18
Contractors	8
Totals	26

Region 2 Significant Activities

Superfund and Oil Sites

- R2 estimates that there are 1,700 active and temporarily closed underground storage tank (USTs) facilities in PR.
- R2 is assessing Superfund and oil sites in PR and USVI as part of R2's redeployment plan. Available CEPD staff are coordinating with the response command structure to provide support in other assessments, such as chemical and oil facilities, NPL, and removal sites.

- The Regulated Facility Team (RFT) continues efforts to contact significant RMP, FRP, and SPCC companies that have not yet responded to the post-storm assessment via email or by phone. Several significant RMP, FRP, and SPCC companies in PR and the USVI, such as Puma, PRASA, Total, and WAPA have preliminarily reported no damage to oil, chemical, or flammable operations.
- The RFT is providing compliance assistance to seven RMP, FRP, and/or SPCC facilities that have reported minor spills or releases. The RFT will remain in contact with these facilities until their spills/releases are resolved.
- There are 23 Superfund and oil sites (20 in PR and 3 in USVI). EPA has visited **four NPL sites and one oil site**. EPA is prioritizing the remaining NPL sites and have identified Papelera, Vega Baja, Juncos, Vega Alta, and Upjohn as first priorities. The table below lists sites where assessments have been completed or completed a phase of assessment.

SUPERFUND SITES (NPL, Removal and Oil)						
Site	Type	Phase 1:	Phase 2		Phase 3	All Phases Completed
		Post-Storm Assessment	Site Inspection Needed	Inspected	Additional Response Action	
PUERTO RICO						
Arecibo Battery Recycling Corp.	Removal & NPL*	09/22/2017	No	09/22/2017	No	09/22/2017
Corozal Battery	Removal & NPL*	09/24/2017	No	09/24/2017	No	09/24/2017
Puma Caribe (CAPECO)	Oil Response	09/21/2017	No	09/25/2017	No	09/25/2017
Papelera Puertorriquena, Inc.	NPL	09/29/2017	No	09/29/2017	No	09/29/2017
USVI						
TUTU Well Field	NPL	10/1/2017				

* These are Sites that have both a Removal and Remedial program action. Only one assessment will be conducted per Site.

Regulated Facilities in Puerto Rico

Facility Type	Sites Identified	Pre-Storm Remote Assessment	Post Storm Remote Assessment	Post Storm Field Assessment	Follow-up Action Required
RMP	56	56*	44^	0	0
FRP	22	22*	10^	2	2
SPCC (non-FRP)	232 [#]	232 ^{#*}	4^	0	0
Total	310 [#]	310 [#]	58^	2	2
* Pre-Hurricane email requested facilities to self-identify any pre-existing compromised conditions (construction at process areas, tank maintenance, etc.). No facilities reported pre-existing compromised conditions.					
^ Based on Post-Hurricane oil spill/chemical release/damage assessment email and phone calls.					
[#] There is no SPCC submission or de-registration requirement. This number reflects the number of known non-FRP SPCC facilities indicated as "active" in the Oil Database.					

Regulated Facilities in U.S. Virgin Islands

Facility Type	Sites Identified	Pre-Storm Assessment	Post Storm Assessment	Post Storm Field Assessment	Follow-up Action Required
RMP	1	1*	1^	0	0
FRP	6	6*	5^	1	0
SPCC (non-FRP)	57 [#]	57 ^{#*}	1^	1	1
Total	64 [#]	64 [#]	7^	2	1
* Pre-Hurricane email requested facilities to self-identify any pre-existing compromised conditions (construction at process areas, tank maintenance, etc.). No facilities reported pre-existing compromised conditions.					
^ Based on Post-Hurricane oil spill/chemical release/damage assessment email and phone calls.					
[#] There is no SPCC submission no de-registration requirement. This number reflects the number of known non-FRP SPCC facilities indicated as "active" in the Oil Database.					

Drinking Water / Wastewater (DW/WW) Assessments

USVI

- Large quantities of bleach are needed to disinfect contaminated cisterns. EPA is coordinating this issue with FEMA and Department of Planning and Natural Resources (DPNR).
- USVI is building additional water storage:
 - St. Croix: The Concordia potable water pump station is online and the west end of the island was expected to gain water storage as early as September 29th. The Kingshill tank was repaired and should begin to build storage and the west end of the island should begin to receive potable water service. The island has three-days emergency water supply.
 - St. Thomas: Potable water service restored to all communities in the east end of the island and two districts. The island has three days of emergency water supply.
 - St. John: Potable water service is available throughout the island. The island has four days of emergency water supply.
- EPA is working to procure a contract with Ocean Systems for sampling and lab analysis on St. Croix, St. Thomas, and St. John. The Ocean Systems lab on St. Thomas is functioning under generator power. The Ocean Systems lab on St. Croix is not operational due to lack of power; EPA requested and is waiting for FEMA to provide a generator for this facility. Until a generator is secured for the St. Croix lab, EPA will continue to analyze the collected water samples on St. Croix utilizing a Colilert field test kit for the presence/absence of bacteria.

Drinking Water and Wastewater Assessments* (September 30, 2017)		
Assessment Types	Daily Assessments	Total Assessments
On-Site DW Assessments	8	48
On-Site WW Assessments	0	0
*On-site assessment of drinking water or wastewater facilities is a site visit to a facility to determine operating status and overall needs (i.e.; power, treatment chemicals, fuel for generators).		

St. Croix

- EPA and USVI DPNR drinking water teams assessed 101 of 161 total (62%) public water systems in St. Croix and tested the 66 that were still functional; of 26 testing positive for E. Coli, 12 were disinfected or otherwise brought back into compliance, remaining 15 require follow-up from DPNR and EPA.

Public Water System Sampling on St. Croix				
Total Public Water Systems on St Croix sampled to date	Total number of samples to date	Total systems assessed to date	Total number of systems resampled after positive E. coli	Total number of systems with negative E. coli results after resampling
66	75	101	12	12

St. Thomas and St. John

- EPA met with the DPNR Commissioner to discuss upcoming activities in St. Thomas and St. John. The DPNR requested that EPA not take any DW samples on St. Thomas or St. John until October 4th, at the earliest. The Commissioner would like the opportunity to assign appropriate DPNR staff to assist in the sample collection and prioritize facilities.
- As reported in R2's October 1st Management Report, EPA met with WAPA personnel to discuss oil spill issues near a WAPA drinking water intake in Krum Bay, St. Thomas. The oil spill is originating from sunken and partially sunken vessels in Krum Bay. WAPA has boomed off the drinking water intake and collects samples of the drinking water supply on a regular basis. As of October 2nd, sample analysis has indicated the water system has not been impacted by the oil spill. EPA is meeting with the USCG to discuss further prevention and remediation strategies for the mitigation of the oil spill

On PR

- FEMA, USACE, EPA, and DOH met on September 29th to coordinate federal support to non-PRASA drinking water facilities. In Puerto Rico, there are 260 independent private and community water treatment systems that serve approximately 4% of the population. One of the recommendations is the deployment of 8 Assessment Teams starting Monday, October 2. Two teams will be conducting the first assessment visits to the Non-PRASA systems in the Municipalities of Caguas and San Lorenzo.
- Out of PRASA's 52 facilities, 9 are operational, 19 are non-operational, and 24 have an unknown operational status.
- EPA has received requests of support from PR's Environmental Quality Board (EQB) to small oil spills. EQB has used their contractors to deploy booms and pads to control these spills.

Drinking Water and Wastewater Assessments* (as of September 30 th)		
Assessment Types	Daily Assessments	Total Assessments
On-Site DW Assessments	0	4
On-Site WW Assessments	0	8
<i>*On-site assessment of drinking water or wastewater facilities is a site visit to a facility to determine operating status and overall needs (i.e.; power, treatment chemicals, fuel for generators).</i>		

PR Air Monitoring Activities

- EQB is planning to conduct an assessment on the conditions of the ambient air monitoring network. The network was taken offline prior to Hurricane Maria landfall. There is no update or information on the status or damages. They will staff an assessment team once their employees are able to return.

Debris Recovery

On PR

- EPA will hold a second meeting on October 2nd to discuss the strategy for the management of hazardous wastes and household hazardous wastes.
- Municipalities report a large amounts of clandestine dumps in their communities. They are concerned with public health and environmental impacts.
- EPA continues to meet with FEMA, USACE, EQB, SWMA, EPA, and private contractors to discuss details for proposed plan to regional debris collection and processing centers in 6 zones throughout Puerto Rico.

On USVI

- In St. Croix, an EPA OSC takes part in the daily Debris Management meetings. EPA will advise on air monitoring and/or sampling protocols associated with the burning of debris. Work continues to develop a debris management plan. As of October 2nd, no decision has been made on whether there will be burn operations.
- According to the October 2nd R2 Management Report, FEMA indicated that EPA assistance may be requested for medical waste issues resulting from the re-establishment of medical facilities on St. Croix and St. Thomas.

Region 4 Significant Activities

Due to the new reporting schedule, this section will not be updated until Tuesday, October 3rd.

- The Key Largo Water Team completed FDEP-assigned assessments and met with utility personnel regarding the operational status of their drinking water system. The Naples Water Team completed FDEP-assigned projects with visits to two public water systems and a wastewater system. Pending receipt of new assignments, EPA Water Team members demobilized on September 28th.
- On September 26th, R4 was released from staffing the ESF-10 Desk at the State Emergency Operations Center.

Orphan Container and Pollution Response

- All containers previously collected in Collier County by the EPA Orphan Container Group were disposed by Collier County's contractor as of September 29th.
- From September 27-29th, EPA teams conducted land-based assessments in the inland zone in the Marathon and Islamorada areas of the Keys. The Key West-Marathon Airport has been established as the initial container staging area.

EPA Container Assessment Targets (Identified to Date—Florida Keys)			
USCG Sector	Targets Identified/Assessed	Targets Completed*	Targets Remaining
Key West	62	0	62
*Removed or determined no further action necessary			

Drinking Water / Wastewater (DW/WW) Assessments

- ESF-3 was tasked to provide technical assistance to the USACE for water infrastructure assessment. Field and remote assessment activities have been completed.
- The USACE and the Water Protection Division has completed their field mission of assisting FDEP in assessing the status of drinking water and wastewater facilities. The Facility Assessment Support Team (FAST) completed 592 assessments of the 1,112 non-community drinking water systems assigned to the team by FDEP.

Status of Community Drinking Water Systems (CWS) and Total Population Served in Florida				
	Large CWS (Over 3,300)		Small CWS (under 3,300)	
	# Systems	Population Served	# Systems	Population Served
Operational:	395	19,210,964	1,192	684,223
Partially Operational:	1	77,500	14	15,084
Non Operational:	0	0	3	255
Unknown:	0	0	34	10,916
Totals:	396	19,288,464	1,243	710,478
Boil Water Notices	58 Active			

Number and Status of POTWs within Florida			
	NPDES Permitted Facilities		State Permits (Non-NPDES)
	POTW	Non-POTW (Industrial)	
Operational:	143	242	1,766
Partially Operational:	2	1	33
Non Operational:	0	0	88
Unknown:	0	0	121
Totals:	145	243	2,008

Debris Recovery

- An MA providing funding for EPA Landfill Specialty Teams (LST) through November has been approved. Two Landfill Technical Specialists from RCRD mobilized to the Unified Command Post in Miami on September 27th and will provide debris technical assistance to Monroe County and FDEP. LST activities will be limited to technical advice and evaluation. The Team will not be involved in the physical collection or disposal of household hazardous waste.
- The LST will work with the FDEP Marathon Branch (MB) staff on implementing the use of FDEP's Disaster Debris Management Site Checklist. The LST and MB staff will cross-train for the next few days and plan to visit as many Disaster Debris Management Sites as possible.

EPA Headquarters Significant Activities

- The HQ EOC is activated to Level 1 in support of EPA Region 2 and Region 4 responses to Maria and Irma. The HQ EOC is coordinating on several levels with EPA R2, EPA R4, and other Federal agencies. The HQ EOC has deployed personnel to the FEMA NRCC to staff the ESF #10 desk. EPA Senior Management that comprise the Policy Coordination Committee (PCC) developed and issued senior management objectives that form the basis of field strategy and tactics in response to Maria and Irma.

Personnel	AO	OAR	OARM	OCFO	OCSP	OECA	OEI	OGC	OLEM	ORD	OW	PIO	ATSDR	Totals
Employees	0	2	0	0	1	1	1	0	11	0	1	1	0	18
Contractors	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Total	0	2	0	0	1	1	1	0	12	0	1	1	0	19

Other EPA Activities

OECA Civil/CID

- Accumulation of Hazardous Waste On-site Waiver
 - On September 29th, R2 granted a 30-day extension of the 90-day limit on the accumulation of hazardous waste on-site to Johnson & Johnson and Lilly del Caribe Inc. in PR. The two companies are large quantity generators and have informed EPA that because of impacts from the hurricanes, it is currently not possible to make hazardous waste shipments out of PR. It is possible that similar requests will be received from other companies.
- No Action Assurances (NAA)
 - On September 27th OECA issued an amended NAA concerning the importation, sale, donation or distribution of mobile power generators in PR to increase the number of generators available for use during the recovery from the devastation of Hurricane Maria.
 - On September 27th OECA issued an NAA concerning the importation, sale, donation or distribution of mobile power generators in the USVI.
 - On September 21st, OECA issued three NAAs, extending Florida's existing NAAs for truck loading, vapor recovery, and roof landing until October 6th. Additionally, they issued an extension to the waiver for red-dyed diesel fuel until October 6th.
- Orders
 - On September 23rd, R2 issued an emergency order to FEMA and DOD to provide drinking water treatment services on the USVI. The Order terminates on October 8th. FEMA and DOD are working to deploy four treatment units to St. Croix.
 - On September 26th, EPA waived diesel fuel requirements to minimize and prevent disruptions in the supply of diesel fuel for mobile non-road generators and pumps used for emergency purposes in PR effective immediately through October 15th.
 - EPA HQ, Region 4 and the State of Florida are working to evaluate and respond to additional fuel waiver extension requests.

Communications

- R2, R4, and HQ activities related to Irma and Maria response efforts are available at: <http://www.epa.gov/hurricane-irma> and www.epa.gov/hurricane-maria, respectively.
- The HQ EOC Public Information Office continues working with OLEM to develop fact sheets to inform people about issues related to returning after the storms. Topics covered include: household hazardous waste, construction debris, etc.

- A Community Involvement Coordinator (CIC) arrived in PR on October 1st. A PIO will deploy to Puerto Rico on Monday, October 2nd. R2 is continuing to identify personnel and options for deployment of additional CICs and PIOs through October to support ground and REOC operations.
- OPA plans to issue a Maria update news release on October 2nd.

Congressional Inquiries

- Staff from Congressman Brian Mast contacted EPA HQ to inquire whether EPA field personnel could meet with the Congressman this week to discuss Irma related water quality issues. HQ forwarded the request to the Regional Administrator's office. Originally scheduled for September 27th, this meeting is being rescheduled.
- As reported by R2's October 1st Management Report, EPA responded to a request that FEMA received from a Vermont Congressman for information on the safety and distribution of water from 4 cisterns on Vieques. EPA provided guidance from CDC and EPA on cistern disinfection and making drinking water safe following natural disaster.